

D-311453

## INTEGRAL PRIMARY AND SECONDARY HEAT EXCHANGER

## ABSTRACT OF THE DISCLOSURE

An integral automotive refrigerant condenser and oil cooler with a cross flow, one pass configuration has condenser and oil cooler tubes with a common total tube thickness, in spite of the substantially smaller refrigerant  
5 flow passage size. The condenser tubes have the flow passages arranged inside the tube in a novel configuration that accommodates the smaller passage size within the common thickness tube.